

WE CLAIM:

1. A spinal fixation device, comprising:
an elongate body, having a proximal end and a distal end;
a distal anchor on the distal end;
a retention structure on the body, proximal to the anchor; and
a proximal anchor, moveably carried by the body;
at least one complementary retention structure on the proximal anchor
configured permitting proximal movement of the body with respect to the proximal
anchor but resisting distal movement of the body with respect the proximal anchor;
and
a flange configured to receive the proximal anchor, the proximal anchor and
the flange having complementary surface structures to permit angular adjustment with
respect to the longitudinal axis of the proximal anchor and the body and the
longitudinal axis of the flange.
2. The spinal fixation device of Claim 1, wherein the proximal anchor comprises
a tubular housing.
3. The spinal fixation device of Claim 2, in combination with at least one
fixation plate having least one bore sized to receive the tubular housing of the proximal
anchor but to resist distal movement of the flange.
4. The spinal fixation device of Claim 1, wherein the distal anchor comprises a
helical flange.
5. The spinal fixation device of Claim 1, wherein the distal anchor is moveable
from an axial orientation for distal insertion through a bore in a vertebra to an incline
orientation to resist axial movement through the vertebra.
6. The spinal fixation device of Claim 1, wherein the retention structures of the
body and the proximal anchor permit proximal movement of the body with respect to the
proximal anchor without rotation.
7. The spinal fixation device of Claim 1, wherein the retention structures of the
body and the proximal anchor permit proximal movement of the body with respect to the
proximal anchor with rotation.

8. The spinal fixation device of Claim 1, wherein the complementary surface structures comprises a spherical outer surface of the proximal anchor and a corresponding spherical recess in the flange.

9. The spinal fixation device of Claim 1, wherein the flange includes a bone contacting surface that generally faces the distal anchor, the bone contacting surface including a plurality of spikes.

10. The spinal fixation device of Claim 1, wherein the body has length of about 8 millimeters to about 80 millimeters.

11. The spinal fixation device of Claim 1, wherein the body has length of about 20 millimeters to about 40 millimeters.

12. The spinal fixation device of Claim 11, wherein the body has maximum diameter of about 3.0 millimeters to about 5.5 millimeters.

13. The spinal fixation device of Claim 1, wherein the body has length of about 10 millimeters to about 30 millimeters.

14. The spinal fixation device of Claim 13, wherein the body has maximum diameter of about 3.0 millimeters to about 5.5 millimeters.

15. The spinal fixation device of Claim 1, wherein the body has length of about 50 millimeters to about 90 millimeters.

16. The spinal fixation device of Claim 15, wherein the body has maximum diameter of about 4.0 millimeters to about 5.5 millimeters.

17. The spinal fixation device of Claim 1, the body has a maximum diameter of about 3.0 millimeters to about 5.5 millimeters.

18. A method of providing spinal fixation, comprising the steps of:

advancing a fixation device that comprises a body having a first portion that forms a bone anchor and a second portion that forms a proximal end; through a portion of a first vertebra;

advancing the bone anchor of the fixation device into a second vertebra;

advancing a proximal anchor distally along the fixation device; and

proximally retracting the body of the fixation device with respect to the proximal anchor to adjust compression across the first and second vertebrae.

19. The method of Claim 18, wherein the step of advancing a fixation device through a portion of a first vertebra comprises advancing the fixation device through a facet of the first vertebra.

20. The method of Claim 19, wherein the step of advancing the bone anchor of the fixation device into a second vertebra comprises advancing the bone anchor through a pedicle of the second vertebra.

21. The method of Claim 19, further comprising advancing the fixation device through a spinous process of the first vertebra.

22. The method of Claim 21, wherein the step of advancing the bone anchor of the fixation device into a second vertebra comprises advancing the bone anchor through a facet of the second vertebra.

23. The method of Claim 18, wherein the step of advancing the bone anchor of the fixation device into a second vertebra comprises rotating the bone anchor.

24. The method of Claim 18, wherein the step of advancing the bone anchor of the fixation device into a second vertebra comprises rotating the bone anchor comprises compressing an axial orientation of the distal anchor for distal insertion through the bore and expanding the distal anchor to an incline orientation to resist axial movement through the bore.

25. The method of Claim 24, further comprising withdrawing a locking wire into the body to prevent the distal anchor from compressing.

26. The method of Claim 18, comprising drilling a bore in the first vertebra having a diameter slightly larger than the outside diameter of the proximal anchor.

27. The method of Claim 18, further comprising adjusting the angle between a longitudinal axis of the body and the proximal anchor with respect to a longitudinal axis of a flange.

28. A method of providing spinal fixation, comprising the steps of:

advancing a first fixation device that comprises a body having a first portion that forms a bone anchor and a second portion that forms a proximal end into a first vertebra;

advancing a second fixation device that comprises a body having a first portion that forms a bone anchor and a second portion that forms a proximal end into a second vertebra;

coupling a first portion of a fixation structure to the first fixation device;

coupling a second portion of the fixation structure to the second fixation device;

securing the first fixation structure to the first vertebra by advancing a first proximal anchor distally along the body of the first fixation device and proximally retracting the proximal anchor with respect to the body; and

securing the second fixation structure to the second vertebra by advancing a second proximal anchor distally along the body of the second fixation device and proximally retracting the second proximal anchor with respect to the body.

29. A method of treating a fracture in a vertebra, comprising the steps of:

drilling a bore distally into the vertebra in the direction of the fracture;

advancing a fixation device into the bore;

rotating the fixation device to engage bone distal to the fracture; and

advancing a proximal anchor distally along the fixation device to compress the fracture.

30. The method of Claim 29, further comprising providing a flange that is angularly adjustable with respect to the proximal anchor and adjusting the angle of the proximal anchor with respect to the flange.